

## DESCRIPTION OF TABLES AND CHARTS.

Table I gives the data ordinarily needed for climatological studies for about 158 Weather Bureau stations making simultaneous observations at 8 a. m. and 8 p. m., daily, seventy-fifth meridian time, and for about 41 others making only one observation. The altitudes of the instruments above ground are also given.

Table II gives a record of precipitation, the intensity of which at some period of the storm's continuance equaled or exceeded the following rates:

Duration (minutes)	5	10	15	20	25	30	35	40	45	50	60
Rates per hour (inches)	3.00	1.80	1.40	1.20	1.08	1.00	0.94	0.90	0.87	0.84	0.80

It is impracticable to make this table sufficiently wide to accommodate on one line the record of accumulated falls that continue at an excessive rate for several hours. In this case the record is broken at the end of each 50 minutes, the accumulated amounts being recorded on successive lines until the excessive rate ends.

In cases where no storm of sufficient intensity to entitle it to a place in the full table has occurred, the greatest precipitation of any single storm has been given, also the greatest hourly fall during that storm.

The tipping-bucket mechanism is *dismounted* and removed when there is danger of snow or water freezing in the same. Table II records this condition by entering an asterisk (\*).

Table III gives, for about 30 stations of the Canadian Meteorological Service, the means of pressure and temperature, total precipitation and depth of snowfall, and the respective departures from normal values except in the case of snowfall.

Chart I.—Hydrographs for several of the principal rivers of the United States.

Chart II.—Tracks of centers of high areas: and

Chart III.—Tracks of centers of low areas. The roman numerals show the chronological order of the centers. The figures within the circles show the days of the month: the letters *a* and *p* indicate, respectively, the observations at 8 a. m. and 8 p. m., seventy-fifth meridian time. Within each circle is also given (Chart II) the last three figures of the highest barometric reading and (Chart III) the lowest reading reported at or near the center at that time, and in both cases as reduced to sea level and standard gravity.

Chart IV.—Temperature departures. This chart presents the departures of the monthly mean temperatures from the monthly normals. The normals used in computing the departures were computed for a period of 33 years (1873 to 1905) and are published in Weather Bureau Bulletin "R," Washington, 1908. Stations whose records were too short to justify the preparation of normals in 1908 have been provided with normals as adequate records became available and all have been reduced to the 33-year interval 1873–1905. The shaded portions of the chart indicate areas of positive departures and

unshaded portions indicate areas of negative departures. Generalized lines connect places having approximately equal departures of like sign. This chart of monthly temperature departures in the United States was first published in the MONTHLY WEATHER REVIEW for July, 1909.

Chart V.—Total precipitation. The scale of shades showing the depth is given on the chart. Where the monthly amounts are too small to justify shading, and over sections of the country where stations are too widely separated or the topography is too diversified to warrant reasonable accuracy in shading, the actual depths are given for a limited number of representative stations. Amounts less than 0.005 inch are indicated by the letter T, and no precipitation by 0.

Chart VI.—Percentage of clear sky between sunrise and sunset. The average cloudiness at each Weather Bureau station is determined by numerous personal observations between sunrise and sunset. The difference between the observed cloudiness and 100 is assumed to represent the percentage of clear sky, and the values thus obtained are the basis of this chart. The chart does not relate to the nighttime.

Chart VII.—Isobars and isotherms at sea level and prevailing wind directions. The pressures have been reduced to sea level and standard gravity by the method described by Prof. Frank H. Bigelow on pages 13–16 of the REVIEW for January, 1902. The pressures have also been reduced to the mean of the 24 hours by the application of a suitable correction to the mean of the 8 a. m. and 8 p. m. readings at stations taking two observations daily, and to the 8 a. m. or the 8 p. m. observation, respectively, at stations taking but a single observation. The diurnal corrections so applied will be found in the Annual Report of the Chief of the Weather Bureau, 1900–1901, volume 2, Table 27, pages 140–164.

The isotherms on the sea-level plane have been constructed by means of the data summarized in chapter 8 of volume 2 of the annual report just mentioned. The correction  $t_0 - t$ , or temperature on the sea-level plane minus the station temperature as given by Table 48 of that report, is added to the observed surface temperature to obtain the adopted sea-level temperature.

The prevailing wind directions are determined from hourly observations at the great majority of the stations; a few stations having no self-recording wind-direction apparatus determine the prevailing direction from the daily or twice-daily observations only.

Chart VIII.—Total snowfall. This is based on the reports from regular and cooperative observers and shows the depth in inches and tenths of the snowfall during the month. In general, the depth is shown by lines inclosing areas of equal snowfall, but in special cases figures are also given. Chart VIII is published only when the general snow cover is sufficiently extensive to justify its preparation.

TABLE I.—Climatological data for United States Weather Bureau stations, June, 1915.

TABLE I.—Climatological data for United States Weather Bureau stations, June, 1915—Continued.

Districts and stations.	Elevation of instruments.				Pressure.				Temperature of the air.								Precipitation.				Wind.				Show on ground at end of month.				
	Barometer above sea level.	Thermometer above ground.	Anerometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. + 2.	Departure from normal.	Mean maximum.	Mean minimum.	Date.	Mean maximum.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Total.	Departure from normal.	Days with 0.01 or more.	Total movement.	Precipitation.	Wind direction.	Maximum velocity.					
	Ft.	Ft.	Ft.	In.	In.	In.	°F	°F	°F	°F	Date.	°F	°F	°F	°F	°F	°F	In.	In.	Miles	Prevailing direction.	Miles per hour.	Date.	Cloudy days.	Average cloudiness.				
<i>Ohio Valley and Tennessee.</i>							70.9	- 2.3									72	3.72	- 0.5						0-10	5.7			
Chattanooga.....	762	189	213	29.21	30.01	+ 0.01	74.6	- 0.8	94	20	84	56	9	66	26	66	71	2.74	- 1.6	10	4,617	s.	64	s.	14	7	15	5.4	
Knoxville.....	996	93	100	28.96	30.00	- 0.01	72.6	- 0.8	89	20	82	54	24	63	28	66	75	6.34	+ 2.1	10	2,729	n.e.	27	n.w.	3	11	16	6.9	
Memphis.....	399	76	97	29.57	29.99	+ 0.2	76.8	- 1.1	92	21	85	61	8	69	21	71	72	1.42	- 3.0	8	5,120	sw.	42	n.w.	11	11	12	5.0	
Nashville.....	546	168	191	29.42	30.00	+ 0.1	74.6	- 1.7	93	20	84	52	9	65	28	67	73	3.20	- 0.8	13	5,253	w.	46	n.w.	13	4	16	10	
Lexington.....	689	75	102	28.92	29.97	- 0.3	70.2	- 3.0	88	26	79	51	9	61	26	66	77	3.11	- 1.1	12	6,226	n.w.	56	n.w.	20	13	10	5.2	
Louisville.....	525	219	255	29.41	29.99	+ 0.1	72.6	- 2.4	88	26	82	51	8	64	26	66	76	3.69	- 0.5	13	3,935	n.w.	49	n.	21	4	15	11	
Evansville.....	431	72	88	29.50	29.96	- 0.1	73.2	- 2.9	87	16	81	62	8	65	25	67	78	3.69	- 0.5	13	2,226	w.	45	n.	11	5	17	8	
Indianapolis.....	822	154	164	29.11	29.98	+ 0.1	68.5	- 2.9	87	79	48	10	60	27	62	83	2.91	- 1.4	11	5,954	sw.	42	sw.	13	8	14	8		
Terre Haute.....	575	96	129	29.34	29.95	- 0.1	70.5	- 3.0	88	6	80	49	8	61	25	64	80	2.22	- 0.5	10	5,767	n.w.	45	w.	13	3	20	7	
Cincinnati.....	628	11	51	29.31	29.98	- 0.1	69.3	- 4.4	87	13	79	48	10	60	28	63	73	4.47	+ 0.5	11	3,642	ne.	37	n.w.	13	9	11	10	
Columbus.....	824	173	222	29.13	30.00	+ 0.1	68.0	- 3.0	87	13	77	48	10	59	31	61	73	5.06	+ 1.6	13	6,545	se.	52	n.w.	13	12	12	6.4	
Dayton.....	889	181	210	29.02	29.96	- 0.1	68.6	- 3.6	88	78	48	10	59	28	62	73	4.35	+ 0.4	12	5,653	n.w.	46	w.	13	11	13	6.4		
Pittsburgh.....	842	353	410	29.11	30.00	+ 0.1	67.1	- 4.0	87	18	76	44	24	58	28	59	63	5.36	+ 1.5	12	7,180	n.w.	43	n.w.	13	9	8	13	
Elkins.....	1,940	41	50	28.00	30.01	+ 0.1	65.6	- 1.0	89	13	78	37	24	54	40	58	54	2.45	- 2.6	13	2,563	w.	22	w.	11	5	17	8	
Parkersburg.....	638	77	84	29.36	30.02	+ 0.2	69.6	- 1.9	89	13	80	47	24	60	29	58	53	4.84	+ 0.2	11	3,256	se.	40	n.w.	13	11	10	9	
<i>Lower Lake Region.</i>							63.7	- 3.3								70	2.74	- 0.8										4.8	
Buffalo.....	767	247	280	29.18	30.00	+ 0.3	64.0	- 1.1	90	18	73	46	24	55	35	57	51	66	1.72	- 1.4	11	9,498	sw.	78	sw.	13	12	11	5.0
Canton.....	448	10	61	29.54	30.00	- 0.0	63.0	- 2.8	87	7	75	43	9	52	40	57	71	2.58	- 0.8	10	6,086	w.	41	sw.	19	20	6	4.3	
DeWitt.....	335	78	91	29.64	30.00	+ 0.3	60.4	- 3.4	84	70	41	10	51	32	55	51	60	2.29	- 0.8	10	5,757	w.	30	w.	15	14	8	4.5	
Rochester.....	623	97	113	29.45	30.02	+ 0.5	64.0	- 2.1	89	13	74	46	24	54	33	58	49	60	2.98	- 0.8	10	5,322	w.	26	w.	19	14	8	4.8
Syracuse.....	597	97	113	29.39	30.03	+ 0.6	63.2	- 3.7	84	18	74	45	4	53	33	56	50	63	3.47	- 0.4	9	6,924	s.	40	sw.	15	13	7	4.8
Erie.....	714	130	166	29.24	30.00	+ 0.2	64.2	- 2.8	88	72	47	9	50	28	58	54	73	2.57	- 1.2	11	8,639	se.	53	w.	13	10	13	7.0	
Cleveland.....	762	190	211	29.19	30.00	+ 0.2	63.9	- 4.0	87	13	71	44	24	57	27	58	54	72	2.03	- 1.6	12	8,580	se.	47	w.	18	11	12	7.4
Sandusky.....	629	82	103	29.32	30.00	+ 0.2	64.9	- 3.8	88	13	72	48	24	58	27	59	55	73	3.48	- 0.3	9	7,677	e.	40	w.	13	9	13	8.5
Toledo.....	628	208	243	29.32	30.00	+ 0.3	64.8	- 4.0	85	13	73	43	8	56	27	59	55	74	1.85	- 1.5	10	9,288	ne.	48	n.w.	13	7	14	11
Fort Wayne.....	856	113	129	29.09	30.00	- 0.0	64.8	- 3.7	84	6	74	43	10	55	29	59	56	74	2.77	- 0.2	12	5,802	ne.	36	sw.	18	6	12	6.1
Detroit.....	730	218	249	29.22	30.01	+ 0.4	63.1	- 4.7	86	13	72	46	23	54	31	57	52	71	3.71	- 0.2	15	8,186	e.	48	w.	7	7	15	5.0
<i>Upper Lake Region.</i>							58.4	- 4.2								74	3.63	+ 0.5										5.8	
Alpena.....	609	13	92	29.34	30.01	+ 0.05	56.0	- 4.3	85	13	64	39	10	48	34	53	49	75	5.24	+ 1.7	13	7,886	se.	48	se.	18	6	18	6.5
Escanaba.....	612	54	60	29.32	29.95	+ 0.04	56.8	- 3.8	76	2	64	38	23	49	25	52	48	72	3.43	- 0.2	12	6,598	s.	40	ne.	18	9	15	5.2
Grand Haven.....	632	54	92	29.31	29.98	+ 0.02	60.3	- 4.4	84	70	70	41	10	51	32	55	51	73	2.84	+ 0.3	11	6,790	w.	36	sw.	12	14	8	4.6
Grand Rapids.....	707	70	87	29.23	30.00	+ 0.3	63.4	- 4.7	88	6	74	46	24	54	33	58	49	74	1.80	- 0.7	12	4,395	se.	28	w.	13	16	11	6.6
Houghton.....	684	62	72	29.23	29.98	+ 0.2	54.6	- 4.8	82	27	64	37	8	45	33	56	50	68	1.80	- 0.7	12	4,395	se.	31	w.	16	9	9	5.6
Lansing.....	878	11	62	29.05	29.99	- 0.1	61.0	- 6.4	84	6	73	39	10	49	34	57	53	76	3.06	+ 0.6	15	3,767	se.	20	w.	13	7	13	10
Ludington.....	637	60	66	29.29	29.98	- 0.1	57.7	- 5.7	87	27	67	38	10	49	26	54	50	76	2.54	- 1.0	11	6,163	e.	35	s.	18	9	11	5.8
Marquette.....	734	77	111	29.20	30.01	+ 0.7	55.2	- 3.3	87	27	64	39	23	47	32	50	46	73	5.13	+ 1.6	13	6,351	e.	40	sw.	13	4	11	7.1
Port Huron.....	638	70	120	29.31	30.00	+ 0.3	59.7	- 4.1	84	13	69	43	10	51	31	54	51	74	4.10	+ 0.9	14	7,242	ne.	36	n.w.	22	10	18	2.4
Saginaw.....	641	48	82	29.31	30.00	- 0.1	61.5	- 6.6	86	6	72	40	23	51	31	56	53	74	4.75	+ 2.1	14	6,197	e.	44	s.	18	8	11	6.0
St. Ignace.....	614	11	61	29.32	30.02	+ 0.6	58.5	- 2.1	82	28	60	37	10	45	33	50	48	74	3.75	+ 1.0	16	6,127	e.	42	n.w.	22	5	9	16
Chicago.....	823	140	210	29.11	29.99	+ 0.3	63.8	- 2.5	88	6	71	46	9	57	28	57	53	73	3.00	- 0.1	12	7,794	n.	38	s.	18	9	12	9.3
Green Bay.....	617	109	144	29.31	29.96	+ 0.1	60.1	- 5.0	83	29	69	40	9	51	28	56	50	74	2.54	- 1.0	10	6,163	ne.	32	se.	18	3	20	7.0
Milwaukee.....	681	119	133	29.25	29.98	+ 0.3	59.3	- 4.2	84	6	67	42	9	51	28	54	50	74	3.11	- 0.6	10	6,163	ne.	47	w.	28	7	15	5.4
Duluth.....	1,133	11	47	27.94	29.91	+ 0.5	57.6	- 5.9	85	24	69	30	16	46	37	50	43	63	1.64	- 1.9	10	6,868	n.w.	41	n.w				

TABLE I.—Climatological data for United States Weather Bureau stations, June, 1915—Continued.

Districts and stations.		Elevation of instruments.		Pressure.		Temperature of the air.						Precipitation.		Wind.													
		Barometer above sea level.	Thermometer above ground.	Anemometer above ground.	Station, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. + mean min. + 2.	Maximum.	Departure from normal.	Mean minimum.	Greatest daily range.	Mean wet thermometer.	Mean temperature of the dew point.	Mean relative humidity, per cent.	Total.	Days with w. or more.	Total movement.	Precipitation.	Cloudy days.	Average cloudiness.	Snow on ground at end of month.					
		Fl.	Fl.	Fl.	In.	In.	In.	°F 56.8	°F 5.3	°F 67	°F 34	°F 16	°F 51	°F 47	°F 73	3.35 + 0.5	16	5,375 sw.	SW. SW.	25 9	11 15	10 15					
		0-10 5.6																									
<i>Northern Slope.</i>																											
Havre.	2,505	11	44	27.31	29.92	+ 0.07	56.8	88	24	67	34	13	44	39	46	38	61	5,250 + 3.1	14	6,768 sw.	SW. SW.	25 9	11 15	10 15			
Helena.	4,110	87	114	23.80	29.96	+ 0.08	55.2	54	83	24	60	37	13	44	39	46	38	61	5,206 + 0.4	15	4,206 nw.	nw.	25 9	11 15	10 15		
Kalispell.	2,962	11	34	26.92	29.95	+ 0.06	55.8	5.0	84	24	67	36	13	44	39	46	38	61	5,840 + 3.1	17	4,206 sw.	SW. SW.	25 9	11 15	10 15		
Miles City.	2,371	26	48	27.44	29.97	+ 0.12	61.6	4.4	95	25	73	38	8	50	54	53	47	60	5,950 + 2.4	16	6,523 n.	n.	25 9	11 15	10 15		
Rapid City.	3,256	50	58	26.55	29.95	+ 0.10	59.1	4.7	84	27	69	39	7	49	36	52	46	67	1,340 + 0.2	10	8,688 sw.	s.	25 9	11 15	10 15		
Cheyenne.	6,088	84	101	24.02	29.90	+ 0.06	54.6	6.9	78	25	66	29	12	43	36	48	42	66	3,750 + 2.6	10	4,138 nw.	nw.	25 9	11 15	10 15		
Lander.	5,372	60	69	24.64	29.93	+ 0.08	55.4	5.9	86	25	70	34	12	41	38	45	35	60	4,710 + 4.2	18	4,458 nw.	nw.	25 9	11 15	10 15		
Sheridan.	3,740	10	47	26.09	29.96	+ 0.09	49.2	6.8	78	24	63	30	13	37	41	41	35	69	4,710 + 4.2	13	5,288 nw.	nw.	25 9	11 15	10 15		
Yellowstone Park.	6,290	20	11	48	23.89	29.95	+ 0.09	49.2	6.8	78	24	63	30	13	37	41	41	35	69	2,000 + 0.4	13	5,290 se.	se.	25 9	11 15	10 15	
North Platte.	2,821	11	51	27.07	29.96	+ 0.10	63.8	4.6	84	15	74	38	7	54	34	57	54	73	3,390 + 0.1	13	5,290 se.	se.	25 9	11 15	10 15		
								68.2	- 3.6							69	4,730 + 1.6							5.6			
<i>Middle Slope.</i>																											
Denver.	5,291	129	172	24.72	29.89	+ 0.03	62.2	89	11	75	36	7	49	37	51	43	50	1,700 + 0.2	10	5,858 sw.	sw.	17	8 15	7 15	5.2		
Pueblo.	4,085	80	86	25.26	29.87	+ 0.04	60.0	3.0	95	23	70	34	7	53	45	52	42	59	1,260 + 0.2	7	5,111 se.	se.	17	8 15	6 15	4.0	
Concordia.	1,392	59	58	28.49	29.93	+ 0.03	68.3	4.4	86	28	78	49	1	59	27	62	59	70	9,330 + 4.4	19	3,088 se.	se.	19	2 8	10 15	6.7	
Dodge.	2,509	11	51	27.33	29.88	+ 0.01	68.8	4.3	94	17	80	41	7	58	25	62	59	73	2,960 + 0.4	16	7,918 s.	s.	19	10 15	7 15	5.3	
Wichita.	1,358	138	188	28.48	29.89	- 0.02	70.7	3.6	92	19	80	46	7	62	25	65	62	70	5,900 + 1.2	16	8,854 s.	s.	17	4 19	7 15	5.9	
Oklahoma.	1,214	10	47	28.65	29.90	- 0.01	73.7	- 2.0	90	18	82	52	8	65	27	68	66	80	7,230 + 4.2	15	9,527 s.	s.	24	8 18	4 15	5.2	
								78.0	+ 0.8							56	1,160 - 1.5							2.9			
<i>Southern Slope.</i>																	31	0,180 - 0.2							1.7		
Abilene.	1,738	10	52	28.10	29.85	+ 0.03	80.7	2.5	102	19	92	50	1	69	33	69	64	62	2,850 + 0.3	7	9,012 s.	s.	25	17 11	2 15	3.1	
Amarillo.	3,676	10	49	26.22	29.86	+ 0.01	72.4	0.4	103	20	96	42	7	59	37	61	54	62	1,040 - 2.0	7	8,841 s.	s.	25	19 8	3 15	3.1	
Del Rio.	944	64	71	28.89	29.85	+ 0.00	94.0	1.9	101	18	94	61	1	74	27	60	63	60	53	4,194 + 0.0	44	6,194 se.	se.	25	19 8	2 15	2.8
Roswell.	3,566	75	85	26.29	29.81	+ 0.01	74.9	- 1.4	102	20	91	46	8	59	40	58	45	43	0,140 - 1.9	4	5,949 se.	se.	25	20 8	2 15	2.5	
								73.7	- 0.9							31	0,180 - 0.2							1.7			
<i>Southern Plateau.</i>																	36	0,540 + 0.1							2.6		
El Paso.	3,762	110	133	26.10	29.74	+ 0.01	81.6	+ 2.0	102	20	95	56	8	68	34	57	55	25	T. - 0.6	0	8,273 w.	w.	25	21 9	0 15	1.8	
Santa Fe.	2,013	57	62	23.28	29.78	+ 0.03	64.0	- 2.2	86	21	77	38	7	51	31	47	32	34	0,160 - 0.9	4	5,740 sw.	sw.	25	18 12	0 12	3.3	
Flagstaff.	6,908	8	57	23.37	29.81	+ 0.03	56.8	- 2.5	83	30	74	30	5	40	45	49	30	38	0,420 - 0.1	7	3,903 e.	e.	25	22 1	0 1	2.2	
Phoenix.	1,108	76	81	28.63	29.75	+ 0.01	83.4	- 1.0	106	17	99	58	6	58	40	59	39	26	0,480 + 0.4	24	3,906 sw.	sw.	25	3 2	1 1	1.4	
Yuma.	141	9	58	29.60	29.74	+ 0.00	85.4	+ 0.7	112	30	104	59	14	66	46	65	52	40	0,000 + 0.0	7	3,609 sw.	sw.	25	30 0	0 0	0.3	
Independence.	3,910	11	42	25.90	29.80	+ 0.02	71.0	- 2.4	94	29	87	47	12	55	40	50	36	30	0,000 - 0.1	6	5,351 sc.	sc.	25	25 5	0 5	1.5	
								63.2	- 2.5							48	0,540 + 0.1							2.6			
<i>Middle Plateau.</i>																	36	0,540 + 0.1							4.0		
Reno.	4,532	74	81	25.48	29.92	+ 0.06	61.6	+ 0.6	93	30	78	38	12	46	40	46	32	41	0,000 - 0.2	6	5,800 w.	w.	25	29 1	0 15	0.8	
Tonopah.	6,060	12	20	23.07	29.88	+ 0.03	63.5	- 0.6	87	30	75	37	5	52	28	45	35	39	0,040 - 0.4	42	6,733 sw.	sw.	25	24 4	2 15	1.8	
Winnemucca.	3,844	18	56	25.61	29.96	+ 0.08	61.0	- 2.3	91	30	78	34	13	44	45	45	31	41	0,050 - 0.6	2	4,408 ne.	ne.	25	21 6	3 15	2.2	
Modena.	5,479	10	43	24.59	29.85	+ 0.03	60.8	- 2.4	90	30	78	32	12	41	43	44	24	32	0,480 + 0.4	42	7,906 sw.	sw.	25	20 6	5 15	2.6	
Salt Lake City.	4,360	147	189	25.55	29.88	+ 0.03	64.2	- 4.1	92	24	76	42	3	53	30	49	36	39	1,440 + 0.7	7	5,750 nw.	nw.	25	20 6	4 15	2.9	
Grand Junction.	4,802	82	96	25.32	29.84	+ 0.01	68.4	- 4.2	93	24	82	44	4	54	36	49	30	33	0,920 + 0.5	6	5,586 e.	e.	25	19 7	4 15	3.0	
								61.6	- 3.4							48	0,710 - 0.4							4.0			
<i>Northern Plateau.</i>																	36	0,540 + 0.1							4.9		
Baker.	3,471	48	53	26.49	30.06	+ 0.11	56.2	- 2.4	88	23	69	35	11	43	38	45	36	38	0,450 - 0.8	23	4,877 nw.	nw.	25	13 16	1 15	3.9	
Boise.	2,739	78	86	27.15	29.99	+ 0.08	61.8	- 4.2	91	23	75	42	10	49	36	46	36	38	0,480 - 0.9	21	4,462 nw.	nw.	25	17 7	6 15	3.7	
Lewiston.	757	40	48	25.19	30.00	+ 0.06	65.4	- 3.7	97	23	79	45	10	52	40	46	36	38	1,440 + 0.4	19	5,085 e.	e.	25	13 11	6 15	4.1	
Pocatello.	4,477	46	54	25.45	29.91	+ 0.04	58.4	- 5.8	87	24	78	34	13	45	40	46	34	45	0,570 - 0.4	34	5,410 se.	se.	25	12 16	2 15	4.1	
Spokane.	1,929	101	110	27.96	29.99	+ 0.05	61.4	- 2.0	89	23	73	44	11	50	36	50	40	51									

TABLE II.—Accumulated amounts of precipitation for each 5 minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any 5 minutes, or 0.80 in 1 hour, during June, 1915, at all stations furnished with self-registering gages.

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive rate began.	Depths of precipitation (in inches) during periods of time indicated.												
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.
Abilene, Tex.	24-25	8:05 p. m.	D. N. a. m.	1.45	8:24 p. m.	9:04 p. m.	0.09	0.12	0.31	0.50	0.72	0.90	1.00	1.12	1.23					
Albany, N. Y.	18	2:34 p. m.	3:03 p. m.	0.38	2:34 p. m.	2:49 p. m.	.00	.22	.24	.37										
Alpena, Mich.	6	5:40 p. m.	7:40 p. m.	2.21	5:45 p. m.	6:10 p. m.	.01	.42	.71	.90	1.29	1.57								0.34
Amarillo, Tex.	25			0.40																.25
Anniston, Ala.	27			0.61																
Asheville, N. C.	30	3:15 p. m.	4:50 p. m.	0.54	4:27 p. m.	4:39 p. m.	.15	.16	.33	.38										
Atlanta, Ga.	12	5:50 p. m.	8:40 p. m.	1.79	5:58 p. m.	6:33 p. m.	.01	.17	.55	.89	1.18	1.39	1.53	1.58						
Atlantic City, N. J.	22	5:10 p. m.	6:37 p. m.	0.57	5:20 p. m.	5:30 p. m.	.01	.34	.43											
Augusta, Ga.	15	10:15 p. m.	10:45 p. m.	1.13	10:18 p. m.	10:34 p. m.	.01	.23	.67	1.09	1.12									
Baker, Ore.	13			0.23																17
Baltimore, Md.	13	2:30 p. m.	4:30 p. m.	1.43	2:55 p. m.	3:33 p. m.	.01	.28	.59	.94	1.06	1.11	1.25	1.33	1.38					
Bentonville, Ark.	11	5:18 a. m.	11:00 a. m.	1.68	9:12 a. m.	9:40 a. m.	.69	.15	.36	.51	.79	.85								
Binghamton, N. Y.	23-24	10:22 p. m.	7:35 a. m.	2.49	3:05 a. m.	3:40 a. m.	.81	.12	.26	.35	.42	.54	.62	.70						
Birmingham, Ala.	6	3:38 p. m.	4:13 p. m.	0.70	4:16 a. m.	5:01 a. m.	1.61	.05	.14	.18	.21	.26	.37	.44	.56	0.78				
Bismarck, N. Dak.	15	3:34 p. m.	D. N. p. m.	1.41	3:43 p. m.	3:59 p. m.	.04	.05	.23	.57	.79									
Block Island, R. I.	17	10:30 a. m.	11:00 a. m.	0.67	4:15 p. m.	4:06 p. m.	.00	.25	.81	.99	1.08	1.16	1.22	1.28						
Bolse, Idaho.	18			0.31	10:32 a. m.	T.	.22	.34	.50	.63	.67									.28
Boston, Mass.	17			0.69																.41
Buffalo, N. Y.	19			0.44																.39
Burlington, Vt.	11			1.13																*
Cairo, Ill.	4	5:38 p. m.	7:30 p. m.	0.68	6:11 p. m.	6:26 p. m.	.06	.22	.38	.55										
Canton, N. Y.	13-14	11:25 p. m.	D. N. a. m.	0.70	11:32 p. m.	11:47 p. m.	.02	.11	.42	.50										*
Charles City, Iowa	23-24			1.10																
Charleston, S. C.	1-2	7:30 p. m.	D. N. a. m.	1.24	8:41 p. m.	9:29 p. m.	.02	.10	.13	.29	.38	.49	.62	.75	.83	.89	0.94			
Charlotte, N. C.	14	8:38 p. m.	D. N. p. m.	0.97	8:52 p. m.	9:31 p. m.	.05	.20	.35	.39	.46	.57	.60	.72	.80					
Chattanooga, Tenn.	11	1:18 p. m.	2:21 p. m.	0.63	1:28 p. m.	1:43 p. m.	.01	.23	.47	.53										
Cheyenne, Wyo.	5-6			0.34																.16
Chicago, Ill.	12-13	10:45 p. m.	D. N. a. m.	1.54	11:02 p. m.	11:47 p. m.	.01	.18	.31	.46	.56	.72	.82	.89	.92	.98				
Cincinnati, Ohio.	1	12:07 p. m.	D. N. p. m.	0.90	1:15 p. m.	1:29 p. m.	.14	.17	.39	.47										*
Cleveland, Ohio.	2			0.68																
Columbia, Mo.	10	3:34 a. m.	12:10 p. m.	0.83	10:34 a. m.	10:51 a. m.	.01	.35	.70	.76										.27
	16	2:57 p. m.	6:20 p. m.	1.08	3:37 p. m.	4:12 p. m.	.03	.07	.12	.27	.36	.43	.57	.79						
	27	5:30 p. m.	7:10 p. m.	1.02	6:21 p. m.	6:55 p. m.	.01	.06	.41	.63	.76	.85	.91	.96						
Columbia, S. C.	18	1:45 p. m.	D. N. p. m.	0.90	9:11 p. m.	9:38 p. m.	.05	.16	.37	.55	.68	.75	.79							
Columbus, Ohio.	7	3:13 p. m.	3:15 p. m.	0.80	1:51 p. m.	2:10 p. m.	.01	.24	.50	.65	.74									
Concord, N. H.	17		3:40 p. m.	1.02	4:25 p. m.	3:43 p. m.	.39	.68	.94	1.00										
Concordia, Kans.	17	8:07 a. m.	11:03 a. m.	4.02	9:26 a. m.	10:33 a. m.	.34	†	†	†	†	†	†	†	†	3.28	3.28	3.28	3.52	3.63
Corpus Christi, Tex.	4		3:38 p. m.	4:13 p. m.	T.	4:06 p. m.	.01	.13	.28	.62	.76	.83								T.
Davenport, Iowa	12	9:38 p. m.	12:20 p. m.	0.51	9:31 p. m.	9:55 p. m.	.01	.09	.22	.31	.44	.49								
Dayton, Ohio.	26	4:27 p. m.	5:50 p. m.	0.80	4:42 p. m.	4:59 p. m.	.04	.09	.35	.69	.72									
Del Rio, Tex.	5			0.53																.39
Denver, Colo.	23-24			0.39																.22
Des Moines, Iowa.	4	3:50 a. m.	6:10 a. m.	0.58	5:17 a. m.	6:00 a. m.	.12	.30	.38	.43										.46
Detroit, Mich.	16-17			0.89																
Devils Lake, N. Dak.	20	6:29 p. m.	6:40 p. m.	0.55	6:00 p. m.	6:15 p. m.	.06	.19	.35	.41										
Dodge City, Kans.	4	8:57 a. m.	9:15 a. m.	0.47	8:59 a. m.	9:07 a. m.	T.	.28	.47											
Dubuque, Iowa.	12	6:30 p. m.	9:20 p. m.	1.03	7:36 p. m.	8:17 p. m.	.02	.07	.16	.26	.48	.69	.84	.90	.97	.99				
Duluth, Minn.	28	3:37 p. m.	4:33 p. m.	0.48	3:42 p. m.	3:47 p. m.	.01	.39												
Durango, Colo.																				
Eastport, Me.	17			0.71																.52
Elkins, W. Va.	21	8:03 p. m.	9:50 p. m.	0.42	9:20 p. m.	9:38 p. m.	.04	.10	.18	.36	.38									
El Paso, Tex.	23			T.																T.
Erie, Pa.	21			0.68																.42
Escanaba, Mich.	6			0.65																.39
Eureka, Cal.	15			0.03																.02
Evansville, Ind.	6	9:01 p. m.	9:00 p. m.	0.56	8:11 p. m.	8:27 p. m.	.01	.33	.43	.50	.53									
	21	12:05 a. m.	6:30 a. m.	1.50	12:46 p. m.	1:10 a. m.	.01	.37	.69	.86	.94	1.00								
Flagstaff, Ariz.	4			0.31																*
Fort Smith, Ark.	27	8:13 a. m.	1:04 p. m.	1.44	9:01 a. m.	9:44 a. m.	.02	.07	.13	.35	.42	.73	.79	.82	.87	.93				
Fort Wayne, Ind.	5	4:46 p. m.	5:55 p. m.	0.54	5:00 p. m.	5:17 p. m.	.04	.15	.31	.39	.43									
Fort Worth, Tex.	5-6	10:08 p. m.	9:15 p. m.	0.91	7:58 p. m.	8:36 p. m.	.07	.18	.25	.33	.43	.47	.59	.73	.77					
Hartford, Conn.	15		3:15 p. m.	1:24 p. m.	1:19 a. m.	2:15 a. m.	.21	.12	.21	.30	.33	.66	.76	.86	.91					
Havre, Mont.	2-3			0.67																*.27
Helena, Mont.	10-12			0.68																
Houghton, Mich.	5-6			0.72																.25
Houston, Tex.	15			0.33																.20
Huron, S. Dak.	5	D. N. a. m.	7:05 a. m.	0.94	5:26 p. m.	6:03 a. m.	.08	.23	.35	.48	.57	.62	.67	.73	.78					.08
Independence, Cal.	23	6:22 p. m.	7:10 p. m.	0.60	6:27 p. m.	6:49 p. m.	.01	.16	.40	.43	.55	.59	.67	.70	.74					
Indianapolis, Ind.	16	12:28 p. m.	2:12 p. m.	0.58	12:38 p. m.	12:48 p. m.	.02	.22	.44											
Iola, Kans.	10-11	10:55 a. m.	9:15 a. m.	2.34	5:32 a. m.	6:02 a. m.	.53	.15	.38	.98	.120	1.28	1.37							
Jacksonville, Fla.	30	5:02 p. m.	7:35 p. m.	1.40	5:42 p. m.	6:03 p. m.	.11	.20	.46	.58	.70									
Kalispell, Mont.	25-27			0.87																.53
Kansas City, Mo.	10-11	6:50 p. m.	D. N. a. m.	1.43	7:19 p. m.	7:45 p. m.	.03	.23	.39	.55	.81	1.06	1.11							.30
	29	4:13 p. m.	8:00 p. m.	1.22	6:30 p. m.	6:50 p. m.	.26	.21	.33	.62	.79									

\* Self-register not working.&lt;/

TABLE II.—Accumulated amounts of precipitation for each 5 minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any 5 minutes, or 0.80 in 1 hour, during June, 1915, at all stations furnished with self-registering gages—Continued.

\*Self-register not working.

† No precipitation occurred during month.

† Record imperfect.

July 1.

2 May 31.

TABLE II.—Accumulated amount of precipitation for each 5 minutes, for the principal storms in which the rate of fall equaled or exceeded 0.25 inch in any 5 minutes, or 0.50 in 1 hour, during June, 1915, at all stations furnished with self-registering gages—Continued.

Stations.	Date.	Total duration.		Total amount of precipitation.	Excessive rate.		Amount before excessive rate began.	Depths of precipitation (in inches) during periods of time indicated.													
		From—	To—		Began—	Ended—		5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Sandusky, Ohio.	13	3:10 p. m.	5:45 p. m.	1.02	3:13 p. m.	3:33 p. m.	0.01	0.25	0.50	0.70	0.84										
San Francisco, Cal.																					
San Jose, Cal.				0.01																	0.01
San Luis Obispo, Cal.	18			0.03																	.05
Santa Fe, N. Mex.	12			1.17																	.36
Sault Ste. Marie, Mich.	18-19			0.90																	.59
Savannah, Ga.	17																				
Scranton, Pa.	{ 15	2:14 p. m.	3:58 p. m.	0.73	2:35 p. m.	2:47 p. m.	.06	18	38	46	.41										
Seattle, Wash.	12	12:28 p. m.	1:52 p. m.	0.68	1:02 p. m.	1:18 p. m.	.25	10	21	40											.09
Sheridan, Wyo.	11-12			0.24																	*
Shreveport, La.	26	4:50 p. m.	7:10 p. m.	0.83	5:15 p. m.	5:49 p. m.	.07	26	65	73											
Sioux City, Iowa	5	3:45 p. m.	4:30 p. m.	0.88	4:00 p. m.	4:23 p. m.	.01	31	70	81	.87										
Southwest Farallone, Cal.																					
Spokane, Wash.	10-11			0.63																	.17
Springfield, Ill.	10-11			0.80																	*
Springfield, Mo.	30	7:55 p. m.	11:10 p. m.	0.96	9:15 p. m.	9:57 p. m.	.08	28	55	68	.74	0.80									
Syracuse, N. Y.	15	1:26 p. m.	2:25 p. m.	0.42	1:28 p. m.	1:38 p. m.	T.	.23	.36												
Tacoma, Wash.	9-10			0.46																	.19
Tampa, Fla.	8	1:39 p. m.	3:20 p. m.	0.92	1:47 p. m.	2:27 p. m.	.03	10	20	25	.31	.44	0.57	0.68	0.77						
Tatooosh Island, Wash.	11	2:55 p. m.	4:30 p. m.	0.68	3:29 p. m.	3:58 p. m.	.68	11	13	18	.27	.46	.56								.09
Taylor, Tex.	15			0.23																	.11
Terre Haute, Ind.	29			0.73																	.57
Thomasville, Ga.	{ 1	2:15 p. m.	4:40 p. m.	1.53	2:24 p. m.	3:15 p. m.	.01	32	45	52	.59	.73	.87	1.04	1.10	1.17	1.22	1.29			
Thomasville, Ga.	28	10:33 a. m.	1:25 p. m.	0.66	11:38 a. m.	11:35 a. m.	.01	12	20	31	.40	.49	.51								
Toledo, Ohio.	29	11:15 a. m.	12:37 p. m.	1.10	11:36 a. m.	11:53 a. m.	.05	19	31	63	.72										.31
Tonopah, Nev.	4			T.																	T.
Topeka, Kans.	10-11	5:56 p. m.	7:35 a. m.	3.82	6:52 p. m.	8:14 p. m.	.21	22	43	56	.64	.96	1.12	1.27	1.30						
Topeka, Kans.	17	5:25 p. m.	7:30 p. m.	1.12	6:24 p. m.	9:39 p. m.	2.67	.07	.28	.63											
Valentine, Nebr.	19	7:36 a. m.	8:50 a. m.	0.87	8:22 p. m.	9:33 a. m.	.25	.09	.17	.23	.55	.57	.75	.78							
Vicksburg, Miss.	12	12:15 a. m.	2:00 a. m.	0.50	2:24 a. m.	2:39 a. m.	.10	.08	.23	.38											
Walla Walla, Wash.	14	7:31 p. m.	D. N. a. m.	2.61	8:29 p. m.	9:20 p. m.	.09	.17	.42	.66	.82	1.24	1.50	1.71	2.03	2.23	2.33	2.41			
Washington, D. C.	13	2:33 p. m.	3:50 p. m.	0.70	3:20 p. m.	3:32 p. m.	.03	.17	.35	.47	.60	.65									.16
Washington, D. C.	15	3:30 p. m.	4:32 p. m.	1.54	3:37 p. m.	4:27 p. m.	.01	.34	.38	.39	.54	1.00	1.29	1.36	1.39	1.40	1.51				
Wichita, Kans.	6-7	5:30 p. m.	D. N. a. m.	1.12	8:12 p. m.	8:47 p. m.	.04	.07	.12	.18	.27	.47	.58	.63							
Williston, N. Dak.	2-3			0.71	9:30 p. m.	11:37 p. m.	.08	.10	.21	.33	.47	.60	.65								.21
Wilmington, N. C.	8-9	10:35 p. m.	D. N. a. m.	1.08	12:09 a. m.	2:34 a. m.	.33	.19	.40	.54	.64	.70									
Winnemucca, Nev.	11			0.03																	.02
Wytheville, Va.	14	2:18 p. m.	4:40 p. m.	0.78	2:22 p. m.	2:32 p. m.	.01	.16	.32												
Yankton, S. Dak.	28-29	11:15 p. m.	2:00 a. m.	0.71	11:19 p. m.	11:45 p. m.	.01	.24	.42	.46	.53	.58	.61								
Yellowstone Park, Wyo.	17			0.47																	.17

\* Self-register not working.

† No precipitation occurred during month.

TABLE III.—Data furnished by the Canadian Meteorological Service, June, 1915.

Stations.	Pressure.			Temperature.				Precipitation.				
	Station, reduced to mean of 24 hours.	Sea-level reduced to mean of 24 hours.	Departure from normal.	Mean max. + mean min. + 2.	Departure from normal.	Mean maximum.	Mean minimum.	Highest.	Lowest.	Total.	Departure from normal.	Total snowfall.
St. Johns, N. F.	Inches.	Inches.	Inches.	° F.	° F.	° F.	° F.	° F.	° F.	Inches.	Inches.	
Sydney, C. B. I.	29.87	30.01	+0.10	49.0	-2.6	55.9	42.1	87	34	2.55	-0.05	
Halifax, N. S.	29.99	30.03	+ .08	52.6	-2.8	62.0	43.3	74	32	3.38	+0.75	
Yarmouth, N. S.	29.92	30.02	+ .07	53.7	-2.0	65.0	46.4	79	32	4.58	+0.82	
Charlottetown, P. E. I.	29.96	30.03	+ .05	55.8	+0.8	64.4	47.1	75	35	1.60	-1.16	
Charlottetown, P. E. I.	29.98	30.02	+ .10	55.0	-2.4	63.0	46.9	75	37	2.16	-0.51	
Chatham, N. B.	30.01	30.03	+ .14	58.9	-1.1	69.5	48.3	86	35	5.39	+1.83	
Father Point, Que.	29.97	29.98	+ .12	53.7	+0.7	62.4	45.0	83	34	2.05	-0.90	
Quebec, Que.	29.67	29.69	+ .07	62.4	+1.2	73.4	51.5	85	33	2.36	-1.29	
Montreal, Que.	29.78	29.98	+ .04	67.3	+0.4	74.7	56.0	84	33	2.59	-0.94	
Stonecliffe, Ont.	29.39	29.90	+ .05	60.9	-0.7	74.6	47.2	80	37	2.01	-1.12	
Ottawa, Ont.	29.73	30.05	+ .11	63.6	-1.7	74.3	52.3	85	37	3.53	+0.61	
Kingston, Ont.	29.70	30.01	+ .04	62.6	-1.1	71.2	52.1	81	41	2.72	-0.20	
Toronto, Ont.	29.60	29.97	+ .00	62.2	-1.2	73.1	51.3	82	43	1.33	-1.47	
White River, Ont.	28.66	29.97	+ .03	51.7	-7.0	66.9	36.5	81	24	2.75	+0.54	
Port Stanley, Ont.	29.37	30.01	+ .04	60.6	-3.2	70.5	50.6	80	27	4.35	+1.62	
Southampton, Ont.	29.29			57.8	-2.6	67.7	47.8	86	33	3.84	+1.43	
Ferry Sound, Ont.	29.31	29.93	+ .03	60.9	-6.9	73.3	47.8	87	37	2.85	+0.33	
Port Arthur, Ont.	29.27	29.98	+ .04	52.6	-2.8	63.5	43.8	73	36	2.76	-1.95	
Winnipeg, Man.	29.10	29.62	+ .03	57.0	-5.2	65.5	45.4	76	36	2.76	-1.73	T.
Minnedosa, Man.	28.12	29.62	+ .03	54.3	-5.3	65.8	42.8	74	39	5.86	+0.86	0.2
Qu'Appelle, Sask.	27.65	29.58	+ .04	53.9	-6.0	65.0	42.7	78	39	2.66	-0.76	
Medicine Hat, Alberta.	27.63	29.58	+ .03	63.0	-2.0	71.1	48.8	79	49	4.67	+1.51	
Wat Current, Sask.	27.54	29.88	+ .01	55.8	-0.2	66.4	44.1	74	51	2.72	+0.95	
Calgary, Alberta.	26.36	29.85	+ .01	54.1	-1.3	65.6	42.6	78	55	4.92	+1.57	
Banff, Alberta.	25.40	29.66	+ .12	50.2	-1.3	62.2	38.1	76	51	6.07	+2.72	
Edmonton, Alberta.	27.66	29.92	+ .09	54.2	-2.7	64.7	43.6	74	52	5.46	+2.63	
Prince Albert, Sask.	25.32	29.57	+ .03	53.3	-3.5	63.5	44.4	77	50	2.88	+0.87	
Estevan, Sask.	25.19	29.92	+ .06	57.1	-2.4	69.5	44.7	80	51	3.33	+1.32	
Kamloops, B. C.	25.77	30.04	+ .17	63.3	-0.5	73.0	51.5	88	44	2.49	+1.07	
Victoria, B. C.	25.87	30.12	+ .11	57.8	+1.5	65.1	50.5	82	45	6.63	-0.59	
Barkerville, B. C.	25.08	29.95	+ .05	49.5	-1.2	61.1	37.9	72	53	5.27	+1.79	9.0
Hamilton, Bermuda.	29.90	30.06	- .06	73.6	-1.4	79.3	67.3	84	63	10.98	+5.03	

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